APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,880	01/30/2004	Yoshiaki Tanaka	0102/0236	4105

21395   7590   03/04/2009

LOUIS WOO
LAW OFFICE OF LOUIS WOO
717 NORTH FAYETTE STREET
ALEXANDRIA, VA 22314

EXAMINER
FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
03/04/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/766,880	TANAKA ET AL.
	Examiner	Art Unit
	JAMES A. FLETCHER	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *41-43* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *41-43* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Heo et al (5,987,417).

Regarding claim 41, Heo et al disclose a signal encoding apparatus comprising:

- means for generating information (Col 2, lines 10-12 "The audio data is recorded in the linear pulse code modulation [PCM], Dolby AC-3, or MPEG format"); and

- means for formatting the information into a data structure;

  - wherein the data structure has an area containing an audio title set (Col 13, lines 47-50 "the title set information management table recorded in one of the information areas of the DVD audio disk"), the audio title set including data representing a digital audio signal resulting from steps including [1] quantizing a first original audio signal at a first sampling frequency (Col 12, lines 24-31 "a first, second or third number of quantization bits, a corresponding first, second or third sampling frequency, and information relative to the number of audio channels are all recorded on the audio title information management

table"), [2] quantizing a second original audio signal into a

quantization-resultant audio signal at a second sampling frequency

(Col 12, lines 24-31 "a first, second or third number of quantization bits,

a corresponding first, second or third sampling frequency, and

information relative to the number of audio channels are all recorded

on the audio title information management table"), and [3] subjecting

the quantization-resultant audio signal to a bit shift (Col 3, lines 45-51

"If the audio coding mode is 010b or 011b, the quantization information

is defined as follows…01b: the dynamic range control data is present

in the MPEG audio stream"), the first original audio signal being in a

first channel group having multiple channels (Col 12, lines 24-31 "a

first, second or third number of quantization bits, a corresponding first,

second or third sampling frequency, and information relative to the

number of audio channels are all recorded on the audio title

information management table"), the second original audio signal being

in a second channel group having multiple channels (Col 12, lines 24-

31 "a first, second or third number of quantization bits, a corresponding

first, second or third sampling frequency, and information relative to the

number of audio channels are all recorded on the audio title

information management table"), the first sampling frequency being

assigned to each of the channels in the first channel group (Col 7, line

66 – Col 9, 32 "the stream id of the linear PCM audio packet becomes

1011 1101b [private_ stream_ 1], its sub_ stream_ id being 1010 0***b.

Second, the stream id of the AC-3 audio packet becomes 1011 1101b

[private_ stream_ 1], its sub_ stream_ id being 1000 0***b. Third, the

stream id of the MPEG audio packet becomes 1100 0***b or 1101

0***b, having no sub_ stream_ id. In the stream id or sub_ stream_ id,

"***" indicates the decoding audio stream number having a value

between 0 and 7"), the second sampling frequency being assigned to

each of the channels in the second channel group (Col 7, line 66 – Col

9, 32 "the stream id of the linear PCM audio packet becomes 1011

1101b [private_ stream_ 1], its sub_ stream_ id being 1010 0***b.

Second, the stream id of the AC-3 audio packet becomes 1011 1101b

[private_ stream_ 1], its sub_ stream_ id being 1000 0***b. Third, the

stream id of the MPEG audio packet becomes 1100 0***b or 1101

0***b, having no sub_ stream_ id. In the stream id or sub_ stream_ id,

"***" indicates the decoding audio stream number having a value

between 0 and 7"); the bit shift having a quantity common to the

channels in the second channel group (Col 3, lines 45-51 "If the audio

coding mode is 010b or 011b, the quantization information is defined

as follows…01b: the dynamic range control data is present in the

MPEG audio stream");

- o the audio title set including data representing the first sampling

  frequency and the second sampling frequency (Col 12, lines 24-31 "a

first, second or third number of quantization bits, a corresponding first,

second or third sampling frequency, and information relative to the

number of audio channels are all recorded on the audio title

information management table"), data representing the quantity of the

bit shift and channel assignment information for identifying the

channels in the first channel group and the channels in the second

channel group (Col 10, lines 50-54 "The DTS audio packet has one

byte of packet header, one byte of sub_stream_id, 3 bytes of audio

frame information, and one byte to 2016 bytes of DTS audio data. The

stream id of the DTS audio packet is 1011 1101b [private_1], its

sub_stream_id being 1000 1***b. Here, *** of the sub_stream_id

indicates the decoding audio stream number having a value of 0 to 7"

and Col 3, lines 45-51 "If the audio coding mode is 010b or 011b, the

quantization information is defined as follows...01b: the dynamic range

control data is present in the MPEG audio stream").

Regarding claims 42 and 43, Heo et al disclose an apparatus for decoding the

digital audio signal recorded on the digital signal recording medium of claim 40, the

audio signal being in the first channel group and the second channel group, the

apparatus comprising:

- means for generating the data representing the first sampling frequency and

    the second sampling frequency (Col 12, lines 24-31 "a first, second or third

    number of quantization bits, a corresponding first, second or third sampling

frequency, and information relative to the number of audio channels are all

recorded on the audio title information management table"), the data

representing the quantity of the bit shift (Col 3, lines 45-51 "If the audio coding

mode is 010b or 011b, the quantization information is defined as

follows…01b: the dynamic range control data is present in the MPEG audio

stream"), and the channel assignment information for identifying the channels

in the first channel group and the channels in the second channel group (Col

10, lines 38-40 "Explaining the channel assignment of the linear PCM, ACHO

and ACHI channels correspond to L channel and R channel in the stereo

mode, respectively. The multi-channel mode is coded to be compatible with

the stereo mode" and Col 10, lines 50-54 "The DTS audio packet has one

byte of packet header, one byte of sub_stream_id, 3 bytes of audio frame

information, and one byte to 2016 bytes of DTS audio data. The stream id of

the DTS audio packet is 1011 1101b [private_1], its sub_stream_id being

1000 1***b. Here, *** of the sub_stream_id indicates the decoding audio

stream number having a value of 0 to 7"); and

- means for decoding the digital audio signal in the first channel group and the

  second channel group in response to the first sampling frequency, the second

  sampling frequency, the quantity of the bit shift, and the channel assignment

  information (Col 12, lines 24-31 "a first, second or third number of

  quantization bits, a corresponding first, second or third sampling frequency,

  and information relative to the number of audio channels are all recorded on

the audio title information management table" and Col 3, lines 45-51 "If the audio coding mode is 010b or 011b, the quantization information is defined as follows...01b: the dynamic range control data is present in the MPEG audio stream").

Further regarding claim 43, Heo et al disclose a player for reproducing audio contents from the digital signal recording medium of claim 40 which stores the audio signal in the first channel group and the second channel group, the player comprising means for implementing digital-to-analog conversion of the decoding-resultant audio signal to recover a corresponding analog audio signal (Fig. 16, High Performance Digital To Analog converters and Analog Audio Circuitry 117).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FLETCHER whose telephone number is (571)272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF
12 February 2009

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621